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**AMENDED CLAIMS 6, 10, 15, 16, 17, 18, 19, 20 and 21**

6. (Amended) An x-ray image detector according to claim 1, in which the amorphous selenium based multilayer structure is of n-i-p or p-i-n type, wherein the n-layer is a hole blocking layer, the p-layer is an electron blocking layer and the i-layer sandwiched between the n and p layers is an amorphous selenium layer doped with chlorine and arsenic.
10. (Amended) An x-ray image detector according to claim 6, in which the p-layer is a thin layer of arsenic enriched amorphous selenium.
15. (Amended) An x-ray image detector according to claim 6, in which the light transparent biasing electrode is a co-planar indium tin oxide (ITO) layer positioned on top of the amorphous selenium based multilayer structure.
16. (Amended) An x-ray image detector according to claim 6, in which the amorphous selenium based multilayer structure is of the p-i-n type and the light transparent biasing electrode is set to a negative potential to provide the TFT with high voltage protection.
17. (Amended) An x-ray image detector according to claim 6, in which the amorphous selenium based multilayer structure is of the n-i-p type, and wherein a high voltage protective device is also provided shunting the storage capacitance.
18. (Amended) An x-ray image detector according to claim 1, in which the biasing electrode also serves to match indices of refraction of the scintillator and the amorphous selenium based multilayer structure.
19. (Amended) An x-ray image detector according to claim 1, in which the amorphous selenium based multilayer structure is optimized for electrical transport

where dark current is below 200pA/cm<sup>2</sup> and residual image is less than 5%.

20. (Amended) An x-ray image detector according to claim 1, in which the scintillator is made of cesium iodide doped with sodium, or from a material selected from barium fluoride, calcium tungstate and sodium iodide, emitting in the blue spectrum.

21. (Amended) An x-ray image detector according to claim 1, in which the photoreceptor of the amorphous selenium based multilayer structure, the biasing electrode and the scintillator are enclosed in a housing providing environmental, electric and mechanical protection.